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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/886,859	06/21/2001	Hoang Tan Tran	41676/JMC/B600	6112

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EXAMINER	
YANCHUS III, PAUL B	
ART UNIT	**PAPER NUMBER**
2116	

DATE MAILED: 04/13/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/886,859	TRAN ET AL.	
	Examiner	Art Unit	
	Paul B. Yanchus	2116	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *24 January 2006*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-24* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-24* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

This final office action is in response to communications filed on 1/24/06.

For Applicant's convenience a copy of the maintained claim rejections is provided below.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 1-5, 11-17 and 23-24 are rejected under 35 U.S.C. 102(e) as being anticipated by Bar-Niv, US Patent no. 6,442,142.

Regarding claims 1 and 13, Bar-Niv teaches a method and apparatus for regulating transceiver power consumption in a communications network comprising:

monitoring data [incoming pulses] received by the transceiver to detect the presence or absence of a received data signal [column 1, lines 57-67]; and

controlling a transceiver state machine [energy-on state machine] to regulate transceiver power consumption in response to the presence or absence of the data received [column 2, lines 32-49].

wherein the transceiver state machine includes at least one of a wake-up control and a power down control, the wake-up control being configured to send power control signals to a transmitter and the power down control being configured to send power control signals to all components of the transceiver [when the ENERGYON signal is at a first level, the transceiver circuitry is awake and when the ENERGYON signal is at a second level, the transceiver circuitry is powered down, column 6, lines 27-31].

Regarding claims 2 and 14, Bar-Niv teaches monitoring data received during a time period of normal operating power consumption [106 in Figure 4 and column 6, lines 11-15 and 29-32, power is supplied to transceiver circuitry when ENERGYON is at level 1] and upon detecting the absence of a received signal for the first predetermined time [256 ms], controlling the transceiver state machine to regulate transceiver power consumption to be at minimized operating power [104 in Figure 4 and column 6, lines 16-20 and 29-32, transceiver circuitry is powered down when ENERGYON is at level 0].

Regarding claims 3 and 15, Bar-Niv teaches monitoring data received during a time period of normal operating power consumption [106 in Figure 4 and column 6, lines 11-15 and 29-32, power is supplied to transceiver circuitry when ENERGYON is at level 1], and upon detecting the presence of a received signal [LINK_ON] for the first predetermined time, controlling the transceiver state machine to regulate transceiver power consumption to be at normal operating power [100 in Figure 4 and column 6, lines 11-19 and 29-32, power is supplied to transceiver circuitry when ENERGYON is at level 1].

Regarding claims 4 and 16, Bar-Niv teaches monitoring data received includes comparing a received data signal [differential voltage, column 4, lines 25-46] from the

communications network with a reference signal [300 mV, column 4, lines 25-46] and controlling the transceiver state machine when a magnitude of the received data signal exceeds the reference signal [column 2, lines 50-67].

Regarding claims 5 and 17, Bar-Niv teaches monitoring data received during a time period of minimized operating power consumption [104 in Figure 4 and column 6, lines 16-20 and 29-32, transceiver circuitry is powered down when ENERGYON is at level 0], and upon detecting the absence of a received signal for the first predetermined time, controlling the transceiver state machine to regulate transceiver power consumption to be at minimized operating power [104 in Figure 4 and column 6, lines 21-32, transceiver circuitry is powered down when ENERGYON is at level 0].

Regarding claims 11 and 23, Bar-Niv teaches monitoring data received during a time period of minimized power consumption [104 in Figure 4 and column 6, lines 16-20 and 29-32, transceiver circuitry is powered down when ENERGYON is at level 0], and upon detecting the presence of a received signal for a predetermined standby time, controlling the transceiver state machine to regulate transceiver power consumption to be at normal operating power [100 in Figure 4 and column 6, lines 21-32, power is supplied to transceiver circuitry when ENERGYON is at level 1].

Regarding claims 12 and 24, Bar-Niv teaches monitoring data received during a time period of minimized power consumption [104 in Figure 4 and column 6, lines 16-20 and 29-32, transceiver circuitry is powered down when ENERGYON is at level 0], and upon detecting the presence of a received signal for a second predetermined time subsequent to the predetermined standby time, controlling the transceiver state machine to regulate transceiver power

consumption to be at minimized operating power [100 in Figure 4 and column 6, lines 21-32, power is supplied to transceiver circuitry when ENERGYON is at level 1].

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 6-10 and 18-22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bar-Niv, US Patent no. 6,442,142. in view of, Uppunda et al., US Patent no. 6,678,728.

Regarding claims 6 and 18, Bar-Niv, as described above, teaches a method and apparatus for regulating transceiver power consumption in a communications network. Bar-Niv does not teach controlling the transceiver to transmit link determination signals to devices on the communications network when the transceiver is in a power-down mode. Uppunda et al. teaches transmitting link signals [keep-alive packets, column 1, lines 25-29 and column 3, lines 40-42] to other devices on the network while in a powered down state [sleep state, column 1, lines 20-29 and column 3, lines 40-42].

It would have been obvious to one of ordinary skill in the art to combine the teachings of Bar-Niv and Uppunda et al. Periodically transferring link signals from a first device that is in a sleep state to other devices on the network indicates to the other devices on the network that the

first device is still connected to the network, even though it is idle [Uppunda et al., column 1, lines 20-29].

Regarding claims 7 and 19, Uppunda et al., as described above, teaches periodically transferring link signals to other devices on the network while in a sleep state. Uppunda et al. further teaches exiting the sleep state only when wake up packets are received from other devices on the network [column 3, lines 48-56]. Therefore, Uppunda et al. teaches transmitting link signals to other devices on the network while in a sleep mode and then remaining in sleep mode if no wake packets have been received from the network.

Regarding claims 8 and 20, Uppunda et al., as described above, teaches that, when in sleep mode, a first device periodically sends link signals to other devices on the network to indicate that it is still connected to the network. Uppunda et al. further teaches that before transferring data to the first device from a second device on the network, the second device must check that the first device is connected to the network [column 1, lines 12-25]. The second device only sends data to the first device when it is determined that the first device is connected to the network. Since the link signals are used to indicate to the network that the first device is connected to the network, the second device would send data to the first device in response to the link signals.

Regarding claims 9 and 21, Uppunda et al., as described above, teaches periodically transferring link signals to other devices on the network while in a sleep state. Uppunda et al. further teaches exiting the sleep state when wake up packets are received from other devices on the network [column 3, lines 48-56]. Therefore, Uppunda et al. teaches transmitting link signals

to other devices on the network while in a sleep mode and then exiting the sleep mode when wake packets have been received from the network.

Regarding claims 10 and 22, Uppunda et al., as described above, teaches that, when in sleep mode, a first device periodically sends link signals to other devices on the network to indicate that it is still connected to the network. Uppunda et al. further teaches that before transferring data to the first device from a second device on the network, the second device must check that the first device is connected to the network [column 1, lines 12-25]. The second device only sends data to the first device when it is determined that the first device is connected to the network. Since the link signals are used to indicate to the network that the first device is connected to the network, the second device would send data to the first device in response to the link signals.

Response to Arguments

Applicant's arguments filed on 1/24/05 have been fully considered but they are not persuasive.

Regarding claims 1-24, Applicant argues, "Bar-Niv does not disclose or suggest a wake-up control that sends power control signals to a transmitter nor does it disclose or suggest a power down control that sends power control signals to all components of the transceiver, except the transmitter and signal detection." Applicant further argues, "Bar-Niv only discloses a single signal which powers down the entire transceiver circuitry when its signal is at 0." Examiner disagrees. Bar-Niv discloses a signal, which controls whether all of the transceiver circuitry is to be powered down [ENERGYON, column 6, lines 21-31], but does not disclose that the signal

actually powers down the transceiver circuitry. The ENERGYON signal is provided by the energy-on generator to a power module [column 6, lines 27-28 and Figure 1]. The power module sends power control signals to power down the transceiver circuitry when the ENERGYON signal is at level 0 [column 5, lines 58-63, column 6, lines 27-31 and Figure 1]. Together, the energy-on generator, the ENERGYON signal and the power module act as a power down control being configured to send power control signals to all components of the transceiver. Claims 1-24 recite the limitation, "wherein the transceiver state machine includes at least one of a wake-up control and a power down control, the wake-up control being configured to send power control signals to a transmitter and the power down control being configured to send power control signals to all components of the transceiver." In order to read on this limitation, Bar-Niv is only required to disclose one of either a "wake-up control being configured to send power control signals to a transmitter" or a "power down control being configured to send power control signals to all components of the transceiver." As described above, Bar-Niv discloses a power down control being configured to send power control signals to all components of the transceiver. Therefore, Bar-Niv does disclose "at least one of a wake-up control and a power down control, the wake-up control being configured to send power control signals to a transmitter and the power down control being configured to send power control signals to all components of the transceiver."

The rejections to claims 1-24 are respectfully maintained.

Conclusion

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Paul B. Yanchus whose telephone number is (571) 272-3678. The examiner can normally be reached on Mon-Thurs 8:00-6:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Lynne H. Browne can be reached on (571) 272-3670. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

LYNNE H. BROWNE
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2100

Paul Yanchus
April 7, 2006